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Chironomids of the Subfamily Diamesinae (Diptera, Chironomidae) from Japan

III. *Boreoheptagyia unica* sp. nov.

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Abstract Male of *Boreoheptagyia unica* sp. nov. is described from the Nikko National Park, Honshu, Japan.

Key words: Diptera; Chironomidae; Diamesinae; *Boreoheptagyia*; taxonomy; morphology; distribution.

Introduction

The genus *Boreoheptagyia* BRUNDIN, 1966, is distributed in the Holarctic and comprises sixteen species (SERRA-TOSIO, 1989). *Boreoheptagyia brevitarsis* (TOKUNAGA), comb. nov., *B. eburnea* (TOKUNAGA), comb. nov., and *B. nipponica* (TOKUNGAGA), comb. nov., were described from Japan by TOKUNAGA (1936, 1937, 1939) and were known as species of the *Heptagyia* genus (SASA, 1989). *Boreoheptagyia brevitarsis* is distributed in Japan and in some regions of the Russian Far East (MAKARCHENKO, 1985). For the two other Japanese species, only females are known and they cannot be correctly identified now.

Below I am describing a new species of *Boreoheptagyia*, *B. unica* sp. nov., from the Nikko National Park, Honshu, Japan.

The terminology follows SAETHER (1980). Material was fixed by 70% ethanol.

Boreoheptagyia unica sp. nov.

(Figs. 1–4)

Type locality. Japan, Honshu, Nikko National Park.

Type material. Holotype: ♂, Toyamazawa River, upper stream, Nikko National Park, altitude 1,450 m above sea-level, Okunikko, Tochigi Prefecture, Japan, June 23–24, 1988, leg. R. UENO. Holotype is deposited in the National Science Museum (Nat. Hist.), Tokyo.

Etymology. From Latin unica – unique.

Description.

Male imago. Generally color dark brown. Legs brownish yellow, with dark

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colored rings (Fig. 3). Body length 2.75 mm. Wing length 2.5 mm. Total length / wing length 1.1.

Head:— Eyes bare, without dorsomedial extension. Coronals 4, outer verticals 4, inner verticals about 19, frontals 1, postorbitals 6, clypeals 14 (44.8–64 μm). Antenna as in female, with 6 flagellomeres and without plumose (Fig. 1). Flagellomeres length (μm): 48: 25.6: 22.4: 28.8: 32: 76.8. First flagellomere with 3 short setae (38.4 μm), second and third with 5 setae (38–40 μm), fourth with 4 setae (38.4 μm), fifth with 5 setae (48–57.6 μm), sixth with 4 setae (44.8–80 μm). Pedicel 44.8 μm in length and with 5 short setae (19–32 μm). AR=0.49. Last 4 maxillary palpal segments length (μm): 70.4: 131.2: 131.2: 2: 236.8. Head width / palp length: 0.79.

Thorax:— Antepronotum with 1–2 dorsal and 14 ventral antepronotals. Acrostichals 20 (16–41.6 μm), in anterior half only; dorsocentrals 9–10, prealars 17–18; supraalars 1; scutellars about 60. Distribution of setae and color of scutum are shown in Fig. 2.

Wing:— Surface with microtrichia, well visible under ×400. R and R_1 with 52, R_{4+5} with 28 macrotrichia. Squama with 30 setae (56–72.6 μm) in 1–2 rows. Anal lobe a little reduced.

Legs:— With short setae, BR_{1-3}=1.6–1.8. Front tibial spur length 44.8 μm, middle tibial spurs length 51.2 and 48 μm, hind tibial spurs length 70.4–57.6 μm and with comb of 14 spines.

Length (μm) and proportions of legs:

P	fe	ti	ta_1	ta_2	ta_3	ta_4	ta_5	LR	SV	BV
P_1	781	891	562	315	164	55	82	0.63	2.98	3.63
P_2	1178	1274	740	438	233	82	123	0.58	3.31	3.64
P_3	808	959	562	343	164	41	82	0.59	3.14	3.69

Hypopygium (Fig. 4):— Tergite IX with small anal point (13.2 μm) and 21 short setae (6.6–10 μm). Laterosternite IX with 10–14 setae (56–85.8 μm). Aedeagal lobe (A1) membraneous, with small pores at posterior part. Inferior volsella (IVo) small, with setae in 1–2 rows (36–39.6 μm). Sternapodeme high, trapeziform. Gonocoxite simple, elongate. Gonostylus widest in middle part, surface thickly covered with short spine-like setae; apical part with lobe and two megasetae (16.5–19.8 μm), a seta (13.2 μm) near megaseta present.

Female, pupa and larva are unknown.

Remarks. SERRA-TOSIO (1989) recorded two species of *Boreoheptagyia* with female-like antennae of males. *Boreoheptagyia lurida* (GARRET) from Nearctic has the antenna with 5 flagellomeres and *B. cinctipes* (EDWARDS) has the antenna with 8 flagellomeres. *Boreoheptagyia unica* sp. nov. is evidently different from these species in having 6-flagellomerate antenna and features of hypopygium.

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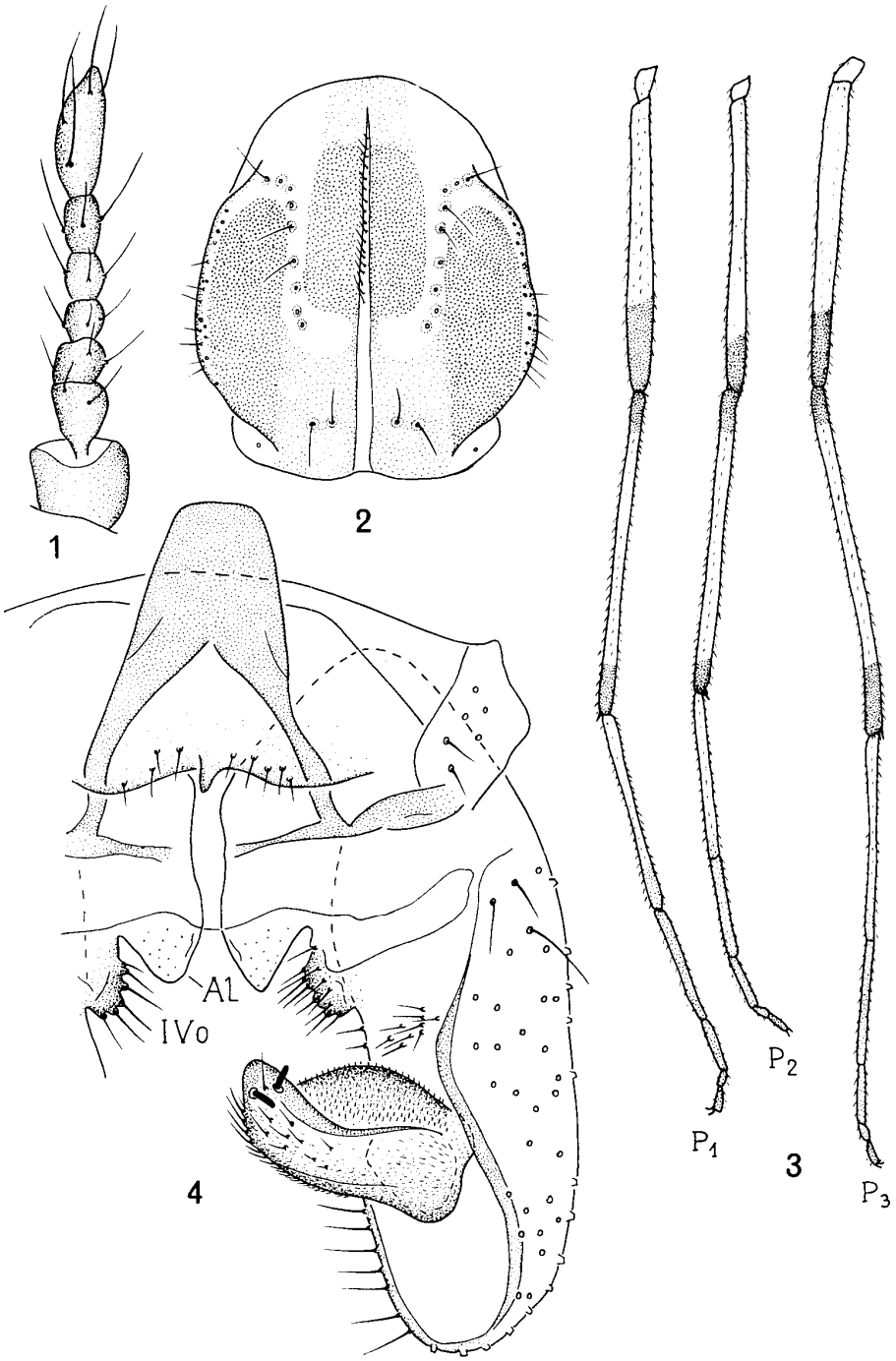

Figs. 1–4. Male of *Boreoheptagyia unica* sp. nov.; 1, antenna; 2, scutum; 3, legs; 4, hypopygium (without proctiger); A1 – aedeagal lobe, IVo – inferior volsella.

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